

# The *Pulse* of Long Island



November 1, 2005 - Vol. 55 No. 9

## Chairperson's Message

*By Daniel Rogers  
drogers@ieee.org*



As of the date I write this, the IEEE Sections Congress is in the future. It will be held in Tampa on October 14-17, and several of our EXCOM members will hopefully be attending. The IEEE Sections Congress is a triennial gathering of Section leadership sponsored by the Regional Activities Board. It is a four day event that involves hundreds of delegates from all ten Regions across the globe. At Congress they learn how to utilize the resources of the IEEE to maximize their effectiveness as IEEE volunteer leaders. Workshop, panel and tutorial sessions are held on topics of interest to the Sections and how we can improve service to our membership. I am looking forward to attending and I'll report back how it went.

Many IEEE members received a letter from Gerry Alphonse, the IEEE USA president regarding Hurricane Katrina relief efforts by Engineers. It can be found at [www.ieeeusa.org/about/katrina/message.asp](http://www.ieeeusa.org/about/katrina/message.asp). He first of all encourages all engineers to send money to the relief agencies involved. Sometimes just supporting the agencies already engaged is the most helpful thing to do. Another more intriguing aspect of his letter is how we as Engineers could help.

I was aware of an effort at a local church to send materials for hurricane relief down south. I helped pack the truck for a few hours, and was struck by the generosity of the truck driver. He owned his own truck and was going on vacation, but then learned that the church had need of transportation for a gymnasium filled with material (food, water, clothes, pet carriers, you name it...). He gave up his vacation and agreed to pack and personally drive a lot of stuff down to Texas. He'll spend 3 days doing it. His was an example of a person with the right attitude and the right assets at the right time to help a bad situation more than anyone else could have.

There is an engineering group at [www.engineerswithoutborders.org](http://www.engineerswithoutborders.org). This group connects willing engineers with charitable causes. Take a look if you want to apply your specialized talents to some worthy causes.

Please consider submitting a paper for the 2006 Long Island Systems, Application and Technology Conference (LISAT2006). This is an important event for the Long Island Section, please support it in any way you can.

## The PULSE is now available on-line!

To get the on-line PULSE and get up-to-date information about the Section, visit our web site at: **www.IEEE.LI**

*You can also register for IEEE LI Section events online at this web site!*

# Official Ballot - 2006

Check the box next to name or enter the nominated candidate below:

## CHAIR

David Wolff      Other \_\_\_\_\_

## FIRST VICE CHAIR

Ted Pappas      Other \_\_\_\_\_

## SECOND VICE CHAIR

Bill DeAgro      Other \_\_\_\_\_

## SECRETARY

Lucyna Plaskota      Other \_\_\_\_\_

## TREASURER

Brian Quinn      Other \_\_\_\_\_

*\*In order to validate the nomination, the envelope must have the member's name and his/her membership number. Please send completed ballots to from now until December 1<sup>st</sup>, 2005 to:*

John Peterson  
50 Dennis Street  
Garden City Park, NY 11040-5043

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## Address All Correspondence to:

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## PULSE Deadlines

For Dec. 2005 11-5-05  
For Jan. 2006 12-5-05

## Consultants

### Network of LI

The Consultants Network of LI maintains a referral service of Engineering, Computer, Managerial and Technical Professionals. Call or write for more information. There is no charge to the client for this service.

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## IEEE Long Island Section Calendar

(No membership requirements, no registration, no fees at meeting unless otherwise noted.)

Please visit our website at [www.ieee.li](http://www.ieee.li) and click on the calendar for online registration (as available) and for listing updates

November 2, 2005 - Lecture, "Principled Negotiation" by Mr. Jim Monnier of Island Learning, Inc., East Northport, NY. A lecture sponsored by the IEEE Consultants Network of Long Island will be held at Briarcliffe College, The Great Room, 1055 Stewart Avenue, Bethpage, NY. The meeting begins at 7:00 PM. The meeting is open to the public and no pre-registration is required. See the announcement in this issue for details. For additional info, contact John Dunn at [ambertec@ieee.org](mailto:ambertec@ieee.org) or at 516-378-2149.

November 21, 2005 - Long island Section Executive Committee (EXCOM) meeting at 6:00 PM, Telephonics Corp. on Route 110 in Farmingdale – This meeting is OPEN and FREE TO ALL IEEE members – Please contact Dan Rogers for reserving a space in the meeting ([drogers@ieee.org](mailto:drogers@ieee.org)).

November 29, 2005 – Power Engineering Society will sponsor a meeting on Hybrid Busses in NYC given by Gary LaBouff at SUNY Farmingdale, IRTT Building, Room 101, Farmingdale, NY. See [www.ieee.li](http://www.ieee.li) for registration and additional information.

December 7, 2005 - “The Center for Excellence in Wireless and Information Technology” is holding its 2005 Conference at the SUNY Stony Brook campus Wang Center. Register at [www.cewit.org](http://www.cewit.org) or call 631 632 8625.”

December 19, 2005 - Long island Section Executive Committee (EXCOM) meeting at 6:00 PM, Telephonics Corp. on Route 110 in Farmingdale – This meeting is OPEN and FREE TO ALL IEEE members – Please contact Dan Rogers for reserving a space in the meeting ([drogers@ieee.org](mailto:drogers@ieee.org)).

March 31, 2006 – Long Island Section Awards Banquet. Huntington Hilton. Route 110, Melville.

May 5, 2006 – Long Island System, Application and Technology Conference. Farmingdale State University of NY, 2350 Broadhollow Road, Farmingdale, NY. Lupton Hall. <http://www.ieee.li/lisat>.

May, 9-11, 2006 – Electro 2006. The New Boston Convention & Exhibition Center - South Boston, Massachusetts. <http://www.nepconeast.com/>.

**CALL FOR PAPERS - Second Annual IEEE Long Island Systems, Applications and Technology Conference—LISAT2006**  
**<http://www.ieee.li/lisat>**

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**The IEEE Consultants Network of Long Island Presents:**  
**“Principled Negotiation” by Mr. Jim Monnier of Island Learning, Inc., East Northport, NY.**  
*More Details Available on our website: <http://licn.org/>*

**Time:** 7 PM.  
**Location:** Briarcliffe College, The Great Room  
1055 Stewart Avenue  
Bethpage, NY 11714

**Program Outline:**  
Negotiation has become the preeminent form of decision-making in most organizations today. As consultants, our challenge is to reach agreements that meet the client’s needs as well as our own.

This session will explore the concept of Principled Negotiation, distinguish between bargaining and negotiation, and give you an opportunity to practice an actual negotiation session.

**Program Coordinator:** John Dunn

**Registration:** None required. For further information, contact the coordinator by e-mail at [ambertec@ieee.org](mailto:ambertec@ieee.org) or by telephone at 516-378-2149.

The presentations are wholly the responsibility of the IEEE Long Island Section and the speakers. The meeting admission is free and open to the public.

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## New Site Searches for Job Listings Far and Wide

BY CHRIS MCMANES

Let's say you're an engineer or other technical professional and you're looking for a new job. You've probably found a few Web sites that list positions in your field, and perhaps you'll get lucky and find the job you want. But with more than 100 000 job sites on the Internet, you can't possibly peruse them all. Wouldn't it be great if there was a site that gathers the pertinent information for you? There is.

The IEEE-USA Employment Navigator collects some 5 million job leads from 170 000 Web sites and presents them in a single, searchable database. The information, updated daily, comes from job boards; corporate, government, and newspaper Web sites; and niche job sites that are specific to an industry, occupation, or geographic region.

More than 100 000 spider bots designed to search the Internet specifically for job listings retrieve the content. In effect, the bots "walk" the Web looking for listings, and will even go to company job sites holding openings that the company may not be advertising elsewhere.

"I'm always amazed at the number of jobs Employment Navigator turns up," says Jean Eason, IEEE-USA vice president of professional activities, who chairs the organization's Employment and Career Services Committee. "This site helps you find those jobs that companies aren't advertising in newspapers or on job boards."

Eason, author of *The Engineer's Guide to Lifelong Employability* (IEEE-USA, 1997), describes Employment Navigator as the best career resource and job aggregator site. "I don't think a lot of those other spiders that go out and search the Web actually get to the depth that this one does," she says.

Subscribers to the service get access to multiple job listings, including those opportunities not found on public job boards. About 30 percent of the jobs in the database fall into that category.

Employment Navigator does not replace the IEEE Job Site, which provides members access to employers who are specifically looking to recruit IEEE members.

"Employment Navigator complements the IEEE Job Site," Eason says. "It's invaluable for beating the bushes for hard-to-find job openings. It will help you identify who's hiring, where they're hiring, and let you do the research that might get you into the door."

**HOW IT WORKS** Subscribers fill out a basic search screen with their skills and qualifications, desired job title and where they'd like to work. The advanced search option includes an "only return jobs" filter that enables you to highlight specific jobs. Unlike search engines that depend on keywords, Employment Navigator is a concept-based technology designed to determine what you mean, not just what you say. By just describing a position—including the skills you'd like to use and related tasks and responsibilities—the patented Match Engine feature can return results that most accurately fit your specifications.

The Job Title Wizard feature allows you to get detailed job descriptions by entering all or any portion of a job title. For example, if you enter "electrical engineer" you get a list of 10 job titles, including electrical controls engineer, electrical test engineer, and electrical engineer–power system engineer. You can then copy and paste the desired job details into your search.

In a recent survey of 168 users, more than two-thirds rated the tool valuable or very valuable; 75 percent log in daily or weekly; and two-thirds report uncovering leads not found on any other job board.

The site is filled with helpful information, such as how to write and send effective résumés, as well as links to career resources including the IEEE-USA Salary Service (<http://www.ieeeusa.org/careers/salary>), the Job Site (<http://careers.ieee.org>), and the IEEE-USA Employment and Career Strategies Virtual Community (<https://www.ieeecommunities.org/ecs>).

A six-month subscription is \$50. See <http://www.ieeeusa.org/careers/employmentnavigator> for more information.

Whether you're out of work or looking for something new, the Employment Navigator provides tools for members to quickly connect to hiring employers and build real career resilience.

"You want to keep yourself employable," Eason says, "and this tool will help you do so."



# CALL FOR PAPERS

for

## LISAT2006



[www.ieee.li/lisat](http://www.ieee.li/lisat)

The second annual  
LONG ISLAND SYSTEMS, APPLICATIONS AND TECHNOLOGY  
CONFERENCE

Friday, May 5, 2006

**INSTITUTE FOR RESEARCH AND TECHNOLOGY TRANSFER**  
**State University of New York, Farmingdale**

This will be the second LISAT Conference. Last year's Conference featured a wide variety of topics presented by invited speakers. It is our intention for LISAT2006 to have most of the papers given by speakers responding to this Call for Papers. Technical papers describing research, development and application on a broad range of electronic and electrical engineering topics are solicited. Each paper will be 30 minutes in length with a 10 minute question period.

Papers will be selected based on originality, quantitative content, clarity, and interest to IEEE members.

To submit a paper, prepare a 500 word summary with a maximum of six figures and a 50 word abstract. They should be e-mailed to the LISAT Technical Program Co-Chairmen, Jesse Taub <[jjtaub@aol.com](mailto:jjtaub@aol.com)> and Dave Mesecher <[d.mesecher@ieee.org](mailto:d.mesecher@ieee.org)>

The deadline for paper submissions is December 2, 2005. If your summary is accepted, you will be given instructions for electronic submission of your full paper. Your paper will be part of the Conference Proceedings-CD ROM to be given to each attendee. While LISAT welcomes a wide variety of papers, some examples of topics of particular interest are:

*Homeland Defense / Satellite Communications / Mobile Communications / RF ID Tag Technology / Ad Hoc Networking / Multi-level Network Security / Sensor Fusion / New Electrical Power Sources / Antenna Systems and Processing / Locationing / Radar Systems and Techniques / Medical Electronics*

**Releases and Approvals:** This conference will be unclassified and attended by both US and non-US persons. It is the author's responsibility to obtain all required company and government releases and approvals prior to submitting a paper. A statement that such releases and approvals have been obtained must be signed by the submitting author and a completed IEEE copyright form (which will be sent to authors of accepted papers) must accompany the final manuscript of each accepted paper.

**Exhibits:** For information on exhibiting at LISAT2006, please contact:

**Fred Kruger** <[f.m.kruger@ieee.org](mailto:f.m.kruger@ieee.org)> or **Mark Sadick** <[mark@sagharborind.com](mailto:mark@sagharborind.com)>

For any other information please contact the LISAT2006 Conference Chair:

**Dr. Charles Rubenstein** <[c.rubenstein@ieee.org](mailto:c.rubenstein@ieee.org)>

Or the LISAT2006 Conference Vice Chair:

**Babak Beheshti** <[b.beheshti@ieee.org](mailto:b.beheshti@ieee.org)>

LISAT2006 is sponsored by  
IEEE Long Island Section and its Technical Society Chapters, and IEEE Region1  
in cooperation with  
The Institute for Research & Technology Transfer (IRTT) at SUNY Farmingdale

The Long Island Chapter of the IEEE Circuits and Systems (CAS) Society is presenting a lecture titled:

**TITLE: Matching Network Design Using Non-Foster Impedances**

**Speaker: Stephen E. Sussman-Fort, Ph.D.**

*Tuesday November 22, 2005 at 6:30pm*

(This seminar is free and all are invited. Refreshments will be served.)

***Who Should Attend?***

RF and microwave engineers interested in high-efficiency, wideband impedance matching networks; circuit designers interested in modern applications of classical network theory

***Abstract:***

Abstract - Non-Foster synthesis bypasses the gain-bandwidth limitations of conventional LC matching and achieves superior broadband performance by employing *negative* circuit elements, which are realized via negative impedance converters. The idea is to construct a negative-image model of an antenna which cancels the antenna's parasitic reactance and transforms its frequency-dependent radiation resistance to a constant value. Successful implementation of negative-image modeling requires the realization of stable, low-loss negative elements. After a discussion of the basic ideas of non-Foster matching, we present experimental results for broadband, stable, high-Q, grounded negative capacitance. Next, in the first experimental confirmation of non-Foster impedance matching for signal reception, we use a floating negative capacitor to cancel a substantial portion of the reactance of a 6" monopole antenna. Over 20-110 MHz, the signal-to-noise ratio improved by up to 6dB as compared to the same antenna with no matching, or to a lossy-matched blade antenna of twice the size.

A paper on this material will appear in the *International Journal on RF and Microwave Computer-Aided Engineering* in March 2006.

***Speaker Bio:***

Stephen E. Sussman-Fort received the Ph.D. degree in electrical engineering from UCLA, the MSEE from Princeton, and the BSEE from the City College of New York. For the past 25 years, he has been a professor in the Electrical and Computer Engineering Department of the State University of NY at Stony Brook where he teaches radio frequency electronics and analog laboratories. In 1992 and 1997, he was a visiting professor at the *Research Institute for Microwave and Optical Communications (IRCOM)* at the University of Limoges, France, where he performed research on microwave active filters. He is the author of *MATCHNET* (Artech House, 1991), a program for the automated design of microwave matching networks, and of *CiAO*, a program for the analysis and optimization of microwave circuits. He also has worked at or consulted for such companies as Bell Laboratories, Hughes Aircraft, TRW, the Aerospace Corporation, IBM, Dayton T. Brown, and Hazeltine. He is now employed by the EDO Corporation where is the principal investigator for research on practical applications of negative impedances. In addition, he is a Senior Member of the IEEE, and an Associate Editor of the *International Journal on RF and Microwave Computer-Aided Design*.

***Location:***

Telebyte, Inc  
270 Pulaski Road  
Greenlawn, NY 11740  
(631)423-3232 ext 469

***For Driving Directions:***

[http://www.telebyteusa.com/driving\\_directions.htm](http://www.telebyteusa.com/driving_directions.htm)

Note: We are just west of BAE on the North side of Pulaski Road

***Registration:***

Registration is required and is available on-line. Please visit the calendar page of the IEEE Long Island Website [www.IEEE.LI](http://www.IEEE.LI) click on the registration link and fill out the form.

***Lecture Coordinator:***

Arthur Williams CAS Chairman for the IEEE Long Island Section [awilliams@telebytebroadband.com](mailto:awilliams@telebytebroadband.com)

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Barry Issberner  
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*Sector Vice President, AEW & EW Systems, Northrop Grumman Corporation*

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### Professional Activities Report for October 2005

By: Irwin Weitman, P.E., PACE Chairman

In an effort to get more attendance of IEEE members to the various Talks, Seminars and other educational presentations we have undertaken to improve the advertising and notification of our public. By providing more advance notice and more complete description of the subject matter we can meet the requirements of the NYS Education department for the awarding of "Continuing Education Units". We can also help or fellow IEEE members who require "CEUs" to meet requirements for renewal of their Professional Engineering Licenses. The following is a proposal that was presented and accepted by the Section ExCom. Some portions of the original were edited out to conserve space.

#### **An ongoing Activity that coordinates technical seminars delivered to IEEE members and their colleagues throughout the year**

A separate Web page can be directly selected on the Section Home Page to access the courses in this Technical Seminar Series.

This is an invitation for Speakers from our Society Chapters and other technical professionals that have technical material of interest to IEEE members. As a further incentive to bring forward speakers and an audience, the PACE committee will make arrangements to award Continuing Education Units for those participants, such as PE license holders, now that New York State requires obtaining these credits for renewal of P.E. Licenses. A fee of \$15 will be charged to those engineers that request CEUs (to cover costs incurred by IEEE). There will be no charge to others who attend these seminars. Where other societies provide PDHs (Professional Development Hours) there may be a charge for their expenses.

#### INSTRUCTOR INFORMATION

IEEE requires application for, and approval of any courses. Irwin Weitman, P.E., Chairman of PACE is available to aid any prospective instructor to provide details in preparing these applications. All the details are available on the IEEE web site. [www.ieee.org/](http://www.ieee.org/).

A wealth of information can be found at the IEEE web site. [www.ieee.org/eab/](http://www.ieee.org/eab/)

Select "CEUS" in the left hand column, then select EAB "Education Resource Guide".

Then select the topics and threads that you are interested in.

#### **Information required for IEEE approval**

Name and credentials of the Speaker/Instructor. Short biographical description, Overview – short description of subject matter of presentation., Course objectives and schedules, Syllabus, Audio-Visual aids, if needed., Pre-requisites if any. Venue., Question/Answer opportunity for participants to interact with Speaker.

IF ANYONE READING THIS FEELS ABLE TO GIVE A 1 TO 6 HOUR TECHNICAL SEMINAR/COURSE SPONSORED BY PACE, PLEASE GIVE ME A CALL AT 631-266-2651. THE INTENDED AUDIENCE IS PROFESSIONAL ENGINEERS, (WHO NEED CONTINUING EDUCATION CREDIT HOURS) AND ANY OTHER INDIVIDUALS WHO WANT TO ENHANCE THEIR TECHNICAL ABILITY.

You may contact me with questions or comments at  
or (631)266-2651.

Irwin Weitman, P.E.

# 30 YEARS AGO

Rod Lowman, Historian

30 years ago, Morris Udall, who later served as Secretary of Environment, aptly observed that “Most of the country’s legislators are lawyers but most of the country’s problems are technical.” To illustrate how unbalanced the representation was, the legislature at the time consisted of:

Background	House	Senate
<b>Lawyers</b>	<b>220</b>	<b>66</b>
Banking and Business	140	22
Educators	63	8
Journalists	24	5
Labor Leaders	3	
Law Enforcement Officers	2	
Medical	5	1
Clergymen	5	
Farmers	31	10
<b>Engineers</b>	<b>2</b>	<b>2</b>
Scientists	2	

So how did the L. I. Section attempt to correct this anomaly? The Executive Committee set up a Legislative Resources Committee with Ed Zebrowski as Chairman to advise local legislators on matters of technical concern. This is now provided on a national level by the IEEE Congressional Fellows.

The Section Chairman proposed a more direct solution – elect more engineers as the legislators. To this end he suggested that we ask for 100 volunteers to run for public office in 1976. Further he suggested that the section set up a lecture series on how to run for public office. To help these volunteers he suggested that we set up committees to seek information on the duties of various offices and that we establish a directory of influential community leaders who could help candidates in their run for particular offices.

Impractical? Not really. At the time Angelo Orrazio, an electrical engineer previously from Sperry was serving in Congress and he promoted a number of bills beneficial to technology and undoubtedly corrected a number of others that were technically flawed.

As your chairman in 1976, I thought it was a good thing for the section to do. Now, as your historian, I still think it is appropriate that we should encourage more engineers to run for public office to make sure that legislation has a sound technical basis. Until we can accomplish this, do consider applying to be a Congressional Fellow.



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